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ABSTRACT

While the average age of journeymen in Alberta, Canada is close to retirement, students wanting to learn skilled trades have difficulties finding companies that will hire them, meaning that there may not be enough apprentices and journeymen to replace retiring workers. To address this situation, Keyano College (KC) joined with 10 local businesses in 1992 to develop the Keyano College Community Cooperative Apprenticeship program for heavy mechanics, millwrights, welders, pipefitters, boilermakers, and automotive mechanics. The program brings students in at the first-year level and rotates them into four different companies for their work experience. In the first 2 years of the program, 39 students were in apprenticeships at 11 local businesses. While students are not guaranteed jobs at the end of the 4-year apprenticeship period, they will have the certification, skills, and experience necessary for employment. Benefits of the program include enthusiastic young trainees and experienced employees later for business, stronger relationships with the business community for KC, learning and employment opportunities for students, and closer contact for instructors to trends in business practices. In addition, the program is easily replicable, with similar programs being developed at Red Deer College (Alberta) and the Northern Alberta Institute of Technology. (Includes a list of businesses in the KC program.) (KP)

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The Keyano College Community Cooperative Apprenticeship Program

keyano college

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SUMMARY

With increasing unemployment rates across Canada, and particularly in the northeast region of Alberta, students graduating from high school face a bleak future with few opportunities to find employment -- especially if they are not on the matriculation track, or do not wish to pursue university level programs. Because of the current structure of training for trades in Alberta through the Apprenticeship system, students wishing to learn a skilled trade face a Catch 22 -- before they can participate in any apprenticeship program, they have to find a company that will hire them. This presents a problem as companies are currently laying off more than they are hiring -- especially unskilled and inexperienced workers. In other words, without skills, the students can't get a job, and without a job, they can't get the skills.

Combined with this is the fact that the current trades-skilled workforce is aging, and that in the years ahead, there is going to be a shortage of qualified journeymen in a variety of trades. The average age of a journeyman today is between 52 and 58. As those workers draw closer to retirement, because of the current Catch 22 with trades training, there are not enough apprentices and journeymen in the system to replace them.

To solve the dilemma this situation presented, Keyano College in Fort McMurray joined forces in 1992-3 with several local businesses to develop an apprenticeship program that would not only allow local high school graduates to enter and learn a trade, but that would also provide a solution to the impending shortage of workers in the regional workforce.

The Keyano College Community Cooperative Apprenticeship program is designed to bring students in at the first-year level in a variety of trades, and rotate them into four different companies for their work experience. The students are not hired as permanent employees, but rather are on the job as a student gaining work experience. While they will not have a guaranteed job at the end of the four-year apprenticeship period, they will have the certification, employability skills and experience necessary to gain a job. And if projections are correct, the workforce will be ready for them at about the time they complete the program at Keyano.

It is an innovative program that changes the concept of how trades training is handled and viewed in Alberta and in Canada; offers employment opportunities for young people in the region; secures a workforce for the future; increases the level and quality of skills of apprentices; and encourages and promotes lifelong learning to both the apprentices and their employers. Based on the success of the program to date, and the fact it is already being duplicated in other communities, it has the potential to change the whole system of training for trades, and create new opportunities for Canada's workforce.

Keyano College Community Cooperative Apprenticeship Program
MAJOR PARTNERS

Education

- **Keyano College**
  8115 Franklin Avenue
  Fort McMurray, Alberta
  T9H 2H7

Industry

- **Catalytic Maintenance Inc.**
  P.O. Box 4012
  Fort McMurray, Alberta
  T9H 3L4
- **Cessco Fabrication & Engineering Ltd.**
  255 MacDonald Crescent
  Fort McMurray, Alberta
  T9H 4B6
- **Clearwater Welding & Fabricating Ltd.**
  8124 Fraser Avenue
  Fort McMurray, Alberta
  T9H 1W6
- **Diversified Transportation Ltd.**
  460 MacDonald Crescent
  Fort McMurray, Alberta
  T9H 4B1
- **Edmonton Exchanger**
  5545 89 Street
  Edmonton, Alberta
  T6E 5W9
- **Finning Ltd.**
  118 MacDonald Crescent
  Fort McMurray, Alberta
  T9H 3G6
- **LeMax Machine & Welding**
  230 MacAlpine Crescent
  Fort McMurray, Alberta
  T9H 4A5
- **Shamrock Ford Sales Ltd.**
  360 MacKenzie Boulevard
  Fort McMurray, Alberta
  T9H 4C4
- **Syncrude Canada Ltd.**
  P.O. Bag 4003
  Fort McMurray, Alberta
  T9H 3H5
- **Williams Chrysler Jeep**
  324 Gregoire Drive
  Fort McMurray, Alberta
  T9H 2L7

OBJECTIVES

In developing the Keyano College Community Cooperative Apprenticeship program, a number of objectives were set out in order to meet the need of students, employers, industry partners, the College and the community.

These include:

- To supply and secure skills for the future, and hence address the projected shortage of skilled, trades workers;
- To create job opportunities within the region for area high school and college graduates;
- To increase the level and quality of skills in apprentices and provide them with increased employability skills;
- To create the opportunity for apprentices to gain broader experience by rotating their work experience in a variety of business and industry settings;
- To change the value system on how trades training is perceived, and to introduce the concept of education and lifelong learning to trades workers as well as industry;
- To achieve maximum enrollment of 100 candidates over a four year period, with preferred mix of 25 recent high school graduates, 25 students of aboriginal descent, 20 female students, 25 Keyano graduates, and 25 mature students.

MEASUREMENT

Since the main objectives of the program are clear and specifically geared to creating jobs, and maintaining a skilled work force, it is and will be easy to track and measure its success.

Initially, the success can be measured in the numbers associated with the program, both from the student and industry perspective. For the first intake into the program in January 1994, over 200 people showed up at an information session for 20 spots; for the second intake in the fall of 1994, 108 local residents wrote the exam to apply for 21 spots.

From the industry side of the partnership, all of the businesses, or employers, involved in the program, continue to be committed to the program, and are eager to continue. Some have expanded their commitment by taking on additional apprentices, while additional businesses signed on as partners in the fall of 1994, based on the success of the first intake, and on the desire to invest in the future of the region.

At a meeting in April 1994, employers from the first intake reported they were very happy with the results and the potential with the program, according to Keyano College Board Member Jim Carter.

"The intent of the meeting we had with the employers was to get a feel for how the program was going with these companies," said Carter. "We also wanted do get an indication of next year's support. It seems the enthusiasm is there, even more so than last year."

Carter, who is also the Chief Operating Officer and Vice-President of Operations for one of the partner companies, Syncrude Canada Ltd., also stated: "I have seen some of these students, and what they are doing, and I would have no problems hiring any of these kids four years from now."

The program expanded in its second intake at the request of employers, and it remains flexible to expand again in the future if and when the businesses express the need.

Finally, the program's success can also be measured in the future through the students' success on apprenticeship exams, the retention rate of both business and students, and in the employment rate for students completing their four-year apprenticeship training.

ACHIEVEMENT OF OBJECTIVES

The whole concept for the Keyano College Community Cooperative Apprenticeship program stems from a variety of sources and studies coming together in February 1992.

A number of provincial and national studies -- including one by the Alberta Chamber of Resources -- clearly demonstrated a shortage of skilled workers by the year 2000. These findings were coupled with the fact that fewer people were entering the trades. Those that were entering were around 28 years of age, which meant by the time they earned their journeyman's ticket, they would be in their mid-30s and would have fewer years to contribute to the workforce, than if they had entered at a younger age.

Companies, including Syncrude Canada Ltd., began to recognize the need for some sort of training program that would ensure they would continue to have access to skilled workers, and that would encourage younger people to get involved in order for the organizations to maintain a competitive edge in the global marketplace.

In February 1992, the Keyano College Board of Governors met as part of its annual planning process and discussed the issue and potential ways the College, which offered apprenticeship training in the region, could help address the problem.

Board Member Jim Carter presented the concept of a cooperative education model for apprenticeship trades.

"We started with the premise that the way people entered the trades training system was fundamentally wrong," he said. "Would we tell a medical student he or she has to have a job treating patients in a hospital before they can enter medical school? That is basically what we are telling people who wanted to learn a trade."

The Fort McMurray region presented a few unique opportunities to try out the new cooperative education model for apprenticeship training as well.

First, Keyano College is involved in a number of innovative partnerships with business and industry, and maintains a number of close linkages with local employers. Based on the strength of these relationships, as well as its willingness to take on innovative programs such as this one, the program had a solid, professional and credible base to begin with.

Second, the Fort McMurray region is one of the largest industrial centres in all of Alberta, if not Canada, and is home to two major industrial employers -- Syncrude and Suncor Inc. Oil Sands Group. That strong industry base means that the area has a high demand, and will continue to demand a high number of skilled trades workers.

Finally, Fort McMurray has a high population of young people graduating from high school with little or no job prospects or opportunities. While post-secondary education is accessible and affordable in the region, there are few alternatives for students who do not go on to university or college, or who do not wish to pursue professional careers.

These three key, unique factors all contributed to the creation of the Cooperative Apprenticeship program.

According to Jim Carter: "Because of the climate these three factors created, we were able to sit back, and find a solution that built on the strengths we had in the region, but also addressed a number of needs...we asked ourselves, how can we take all of the resources we have at our fingertips, and turn it into a win-win situation for everybody."

A priority for the program was also to encourage women and aboriginal people to apply and get involved. This was done to meet the demographics of the region -- 10 per cent of the population is Native, while close to 50 per cent of the population is female -- and to ensure everyone had equal access to the program.

In the first two years of the programs, 39 students are working as apprentices in heavy duty mechanics, millwrights, welding, pipefitters, boilermakers, and automotive mechanics at 11 different Fort McMurray area business and organizations.

There will be over 100 students involved in the program within four to five years, with the potential for more. In a community of 36,000 people with a high demand for skilled workers, that is a positive sign for the area's high school graduates and for employers as skilled workers become in demand towards the year 2000.

INNOVATIVENESS OF PARTNERSHIP

The concept of cooperative education is not a new one. It is currently in place for a number of programs in Canada, especially at the university level and in academic and professional programs. However, the concept is new to the trades.

The challenges addressed in the creation of the Keyano College Community Cooperative Apprenticeship program could only be solved through a radical and innovative shift in thinking. To come up with the structure and format for the program, it required everyone involved to change their paradigm on how to train apprentices, and indeed, how they perceive the trades in general.

This program breaks from the traditional line of thought that it is training a worker, and shifts it to providing work experience for a student. The apprentices in the program are students, like any other student attending classes at Keyano College, and like other Cooperative Education students, a major part of their education comes through on-the-job experience away from the class room setting.

POSITIVE CHANGE

The Fort McMurray region needs to develop a source of skilled trades people. With the average age of trades people and journeyman in the province sitting between 52 and 58 years, and with few entrants into trades and apprenticeship training programs, there will be a severe shortfall of journeymen within the next 10 years.

Through the partnerships developed with the Keyano College Community Cooperative Apprenticeship program, the college and local industry are working together to bridge the gap between unemployment and the apprenticeship program.

The shift in thinking it represents also brings a positive change to the perception of skilled workers. The current perception of trades is that you learn a skill, and you are set for life. But by focusing apprenticeship

training to be an educational program with job training components, the concept of lifelong learning is also reinforced with the apprentices and with the employers.

Rapidly changing technology means that skilled workers must constantly be upgrading their skills, and adapting to the changes in equipment and industry. By realigning apprenticeship training as an educational program, the concept of lifelong learning is integrated into their perspective on learning and their career.

Employers also become more aware of the need for training in order to keep their workers up-to-date with current technology and techniques, and become more open to change, and learning new ideas.

Another positive change comes through the fact this program is an investment in the future of local high school graduates, in industry, in the workforce and in the region. It is a proactive alternative aimed at combatting the economic realities of today, and geared to ensure that there will be no shortage of skilled workers in the years to come.

BENEFITS

To Businesses

The business and industry partners -- or employers -- involved in the Keyano College Community Cooperative Apprenticeship program reap both short and long term benefits through their participation in the program.

They benefit today because they have a young and enthusiastic employee, eager to learn a trade and make a contribution to their organization; they benefit in the long run because they are investing in the future by training a highly skilled and qualified worker, who will be ready to enter the workforce at about the time companies will need to hire journeyman to replace a retiring workforce.

Another key advantage to the businesses participating in the program is that at the end of the apprentices' training, the companies involved will have had the opportunity to see the working style and quality of at least four potential employees, and will have a better idea of the skills they can bring to the company. The employee will also be able to begin contributing the company on the first day of full employment, as they will be experienced in the environment, and will be familiar with the working conditions.

Overall, the businesses will also be getting better workers, because they will bring a range of experience from organizations and operations of all sizes, hence bringing a stronger and broader set of skills. Workers also come to the company with those skills 10 years earlier, at age 23 to 25, which not only increases the length of service, but also involves the employee during his or her most productive employment years.

As well, in most companies, employees are also being asked to do a wider variety of tasks in their jobs, and because of the broad range of experience the apprenticeship students gain by rotating through the companies, they are better able to meet that need.

To Keyano College

Because of the sluggish economy, companies can not afford to hire apprentices, and the number of people learning the trades skills in Alberta, and especially in the Fort McMurray region, is on the decline. As a result, the numbers in Keyano College's trades programs is also decreasing -- and hence, threatening the future of its apprenticeship training programs.

In 1993, the province recommended that several apprenticeship programs be eliminated or down-sized for the next year. As a result, Keyano did dissolve its plumbing apprenticeship program, suspended its carpentry program, and down-sized its partsman program.

In making these adjustments, at the request of Alberta's Apprenticeship Branch of Advanced Education and Career Development, Keyano College President Doug MacRae encouraged the province to look at the potential the Community Cooperative Apprenticeship program offers to help meet the future demands of the trades workforce. He said this program is a proactive solution that encourages and increases the numbers of trades apprentices, and promoted it as an alternative to shrinking programs to meet the existing demand.

"Rather than simply down-sizing to meet the numbers today, the department and government in general should look at increasing the number of apprentices enrolled in training, and find innovative ways to make that happen," said MacRae.

The creation of the program has not only created stability and a future for apprenticeship training in northeastern Alberta at Keyano College, it has also forged a stronger relationship between the College and the local business community. The partnerships created in this program not only strengthen the College's tie to the community, but also opens new doors to future industry training programs, and creates new windows of employment opportunity for students graduating from College programs.

Finally, Keyano College also created a position for one apprenticeship student to work in the Equipment Maintenance Shop at its Heavy Industrial training campus. As a result, the College also receives all of the same benefits of the employers and participating businesses as well.

To the Students

The benefits to the students are numerous. Starting with the basic and most important one -- it offers them the opportunity to learn a skill and gain employment.

When Melanie Best, a 19-year-old participant in the program, graduated from Fort McMurray's Westwood Community High School in June 1993, she knew she wanted to get a job, but found there were no opportunities for her in the community -- most people her age had trouble finding a job, let alone keeping one. The job market was tight, and she had no clear idea of what career path she wanted to start out on. Meanwhile, Jason Hurlburt, 20, knew exactly what he wanted to be -- a welder. But because he was unable to get a company to hire him and sponsor his apprenticeship training, he could not get the training he desired, or pursue the career he had chosen.

The solution for both of these students came through the introduction of the Keyano College Community Cooperative Apprenticeship program. For Hurlburt, it meant the opportunity to fulfill his career dream of becoming a welder; for Best it meant discovering a career direction she never imagined she would be taking -- apprenticing as a heavy duty mechanic.

"I feel really lucky to have been chosen for this program...it is a great opportunity," said Best. "I came in here without any job, or any prospects, and not knowing a thing about engines, or heavy duty mechanics, and now I am an apprentice in a trade I will be doing the rest of my life."

Another key benefit to students is the fact that they gain work experience in four different settings throughout their apprenticeship training. By working four different companies -- ranging from small shop operation to large institutions and corporations -- they gain a wider, more diverse range of experience, which in turn increases their employability skills.

"In most cases, students get better training overall because of the rotation from company to company," according to Keyano College's Dean of Trades and Technology Fred Atkins. "If an apprentice is taking welding, for example, he or she learns different aspects of the trade at each company they work for, and then carry that experience on to their next job."

Gaining work experience in a variety of settings provides them with better adaptability and recognition of and respect for diversity and individual differences, a positive attitude toward change and the ability to identify and suggest new ideas or creative solutions on how to get the job done. It also increases their understanding of how they contribute to their company's or organization's goals, and understand how to work as part of any team.

In short, the Keyano College Community Cooperative Apprenticeship program trains apprentices, and will create journeyman who can bring a broader and more global range of experience to any workplace, and be a more productive and contributing employee.

With this set of skills, and more, the students should have no trouble marketing themselves to potential employers, and finding permanent employment once they achieve journeyman status.

Finally, one additional benefit to the students is that by working in cooperative education program they are able to fund their own education through their work experience. While they are technically considered students, they do receive compensation for their work at the different companies. As students, they have to pay for their own training, and the opportunity to earn while they learn makes their education possible and affordable.

To the Instructors

Trades instructors involved in the program benefit in a couple of ways. First and foremost, they are able to continue in their roles in training people as apprentices, and contribute to the industry. As apprenticeship programs across the province are being down-sized and eliminated, their own jobs and livelihood are in jeopardy.

Second, the instructors also benefit from the relationships and partnerships that are forged with industry. Because technology and equipment is changing rapidly, the partnerships with industry in this program provide opportunities with instructors to stay in close contact with what is really happening in industry. Maintaining the close ties with the businesses, the instructors can in turn ensure what they are teaching in the classroom is current and applicable on the job, and enhance and maintain their own skills at the same time.

To Other Stakeholders

The provincial government's Advanced Education and Career Development department also benefits in that it is presented with an alternative, or model, for trades training for the future. This program is not only creating employment in the region as of today, but starting in four years will also bring an influx of about 20 skilled journeymen annually into the Fort McMurray region.

Trades unions also have offered their support for the program, despite the fact that some union members are currently unemployed, and that the students could be perceived as taking jobs that might otherwise have gone to members. But unions too recognize the looming shortage of workers, and see the value of the cooperative apprenticeship program towards securing the workforce for the future.

To Society

The job prospects for today's youth are not encouraging. Companies and organizations of all sizes are down-sizing and reducing more employees than they are hiring, and there is a high level of competition for the few positions that are available. Choosing a career path is difficult enough for students graduating from high school, let alone choosing one where they will find employment upon completion of their education or training.

The Keyano College Community Cooperative Apprenticeship program helps give students a competitive edge. Because the program provides job opportunities to young people, it is benefitting society, and the government. The fact that students have jobs means they will not require social or financial assistance, and as skilled workers will become contributing members of the community. As well, under the current apprenticeship system, companies lay off apprentices for their training period, or pay the employee when they are training and not contributing to the productivity of the company. The shift this program represents for the trades training means that as students, they are not laid off, and they pay their own way for their education.

DEVELOPMENT OF LONG-TERM RELATIONSHIPS BETWEEN BUSINESS AND EDUCATION

In some ways, the fact the program got off the ground, or was even conceived is because of the strong working relationship Keyano College already had with the local business community. It had proven to be responsive through a number of other partnerships and initiatives -- ranging from a workplace literacy program, to an articulation program for business and corporate training programs, to the development of a shared training facility between education and industry on the college's campus.

All of the previous partnerships and work with the business community helped lay the groundwork for this program, and allowed it to develop and get of the ground as quickly as it did.

The Keyano College Community Cooperative Apprenticeship program has forged new partnerships for the College, and for many of the businesses involved.

It has created stronger linkages between the business partners as well, as in a way they are now sharing employees. The experience the apprentices gain at one company carries over into the next company where they are working.

Operating methods and techniques from larger businesses are brought directly into smaller companies, and vice versa. The students act as the conduit to facilitate this knowledge transfer.

This program has also opened the door on other training possibilities in Fort McMurray. Some of the partners involved have not been involved in training through Keyano College prior to involvement in this program, and in some cases were not even aware that the College offered apprenticeship training in the community.

The program is giving Keyano additional exposure in the industrial sector, and hence creating additional training opportunities that will benefit both the College and the businesses.

The length of the program -- which runs at least four years until students from each intake complete their apprenticeship training -- also bodes well for the long-term nature of the relationship between the education and industry. The ties developed through the partnerships will only grow over time, as the credibility and quality of the students and the program continue to improve.

REPLICABILITY

The potential this program offers is promising and limitless, and in fact could bring about a major shift in how trades training is viewed in Canada.

The Keyano College Community Cooperative Apprenticeship program also represents a number of opportunities because it is designed to look into the future -- to supply the demand for the future workforce, and find solutions today to ensure there will not be an employment gap in skilled trades in the future.

"We are investing in the young people of Canada," says Syncrude Canada's Jim Carter.

Because of the success with the Keyano College Community Cooperative Apprenticeship program, a similar program based on its model is set to begin in January 1995 in Red Deer, Alberta, through Red Deer College and a number of local businesses. As well, the Northern Alberta Institute of Technology (N.A.I.T.) in Edmonton, Alberta, is also currently developing a cooperative apprenticeship program with about 40 businesses in the Alberta communities of Hinton, Edson, Grande Cache and Whitecourt.

And it does not stop there. The Alberta Chamber of Resources will be assisting in the promotion of the program throughout the province to other post-secondary institutions and businesses, in order to help bridge the looming employment gap for skilled workers. From there, it has the potential to expand across Canada and beyond.